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**ATLANTIC JOURNAL**

AND

**FRIEND OF KNOWLEDGE;**A QUARTERLY JOURNAL OF  
HISTORICAL AND NATURAL SCIENCES, USEFUL KNOWLEDGE, &c.  
WITH FIGURES.

BY C. S. RAFINESQUE,

Professor of Historical and Natural Sciences, Member of many learned Societies in America and Europe, Author of many Works, &amp;c. &amp;c.

*Knowledge is the mental food of man.*

VOL. I.

PHILADELPHIA, SPRING OF 1833.

No. 5.

## 119. AMERICAN TRAVELLERS.

*Who have written their travels?* The Americans are great travellers at home and abroad for pleasure, health, or business, as settlers, traders, surveyors, agents, missionaries, navigators, adventurers, &c.; but few are qualified to write their observations, fewer still write them.

I have sent to the society of Geography of Paris, a long critical account of all these last from 1820 to 1832, dividing them into 6 series. In general travels at home or in N. America are the best, abroad the Americans are supercicial, ignorant of languages, and deficient in high acquirements. I give here an abridgement of it.

*First Series. Travellers in North America.*

Astley, 1824. Upper Missouri and New Mexico.

Atwater, 1831. To N. West.

Audubon, 1831. Florida, &c.

Catlin, 1832. On Missouri to Mandans.

Darby, 1820. From New-York to Detroit.

Dunn, 1826. Guatimala.

Dwight, 1828. Northern States and Canada.

Flint, 1826. Western States.

Hall, 1828. Ditto.

Hunter, 1823. Among Western Indians.

James & Long, 1823. Missouri, Oregon and Arkansas.

Keating, 1824. To N. West.

Mackenny, 1827. Lake Superior.

Morse, 1822. Among Indian tribes.

Nuttall, 1821. Arkansas.

Poinsett, 1822. Mexico.

Rafinesque, 1818 to 1830. Fragments of his travels in 18 States—1831. The Mexicans in 1830.

Schoolcraft, 1821. Mississippi—1823. Illinois, &c.

Silliman, 1820. Canada,—Many excursions in his Journal.

Smith, (Jed) 1827. New Mexico.

Stanbury, 1822. Gr. Lakes.

Tanner, 1830. Residence among N. W. Indians.

Thomas, 1820. To Wabash.

Williams, 1827. Florida.

Many other travellers have not yet published their observations, such as Gates, Wyeth, Ware, Cozens, Peale, Mease, &c. or only in Journals, Gazettes, Maps, &c. Foreign travellers and tourists in N. America are not included here, they are mostly worthless, except Weymar, Beltrami, Cox, Franklin, Bradbury, and a few others.

*Second Series. In South America.* Few.

Abbott, 1827. Cuba.

Breckenridge, 1820. Buenos Ayres.

Duane, 1826. Columbia.

Officer, anonymous, 1827. Columbia.

Others will perhaps publish their travels. Eights in Patagonia. Peale, Columbia. Reynolds in Chili, &c.

*Third Series. In the Austral and Pacific Ocean.*

Anonymous Sketches of a Mariner, 1830.

Morrell, 1832. Four Voyages. I have analyzed his discoveries.

Paulding, 1831. To Mulgrave Islands.

Porter, 1822. Cruise. 2d ed.

Stewart, 1827. Havay.—1831. Pacific.

Fanning has promised his Voyages for 1833.

*Fourth Series. In Asia.*

Mrs. Judson, 1827. Asia: the first American Lady who has written her travels.

Waln, 1823. Hist. of China.

White, 1823. Cochinchina.

Wood, 1831. Sketch of China.

Dr. Burroughs to Aslam, Mpt. seen by me.

*Fifth Series. In Africa.*

English, 1823. Nubia.

Ledyard, 1824. Life & travels.

Morrell, 1828-29. South Africa, his third Voyage.

Noah, 1821. Barbary.

Riley, 1824. 2d ed. of Shipwreck.

Shaler, 1826. Algiers.

Ashmun & others have published fragments on Liberia.

*Sixth and last Series. In Europe.* Many tourists on the English plan, not worth mentioning, full of blunders. Lyman in Italy, Carter in France and Italy, are such; they knew not the language of the country! What should we think of an Italian or Russian, writing his travels here without speaking the English. In general tourists are only at home in England. Among the crowd the following may be distinguished for some merit, novelty or talents.

Alden, 1832. Practical tourist.

Anderson, 1831. Greece.

Bigelow, 1830. Sicily and Malta.

Dwight, 1829. Germany.

Griscom, 1821. Europe.

Jones, 1829. Mediterranean.

Webster, 1821. Azores.

Wines, 1832. Mediterranean.

Woodruff, 1830. Malta and Greece.

Young American, 1828.

Spain.

Willis is now writing vapid Letters from Europe.

Dekay promises a Voyage to Turkey, but he spoke neither Greek nor Turkish, as usual.

The dates are those of publication. C. S. R.

#### 120. *Reward of Merit.*

The beautiful gold Medal awarded to Prof. Rafinesque, by the Geographical Society of Paris, has been received with a Diploma of Merit. It bears on one side the head of Minerva and on the other a suitable inscription.

This Society is composed of the most eminent and learned men of France. They have decided that the question of the origin of mankind, and the black nations is as yet insoluble, owing to our imperfect knowledge of many languages; but they have approved and rewarded the memoirs and labors of the writer, as one step towards such a solution, by connecting the languages and traditions of all the nations of the world with the primitive cradle of mankind, Asia and the Imalaya.

It is believed that this is the first instance of such an honor being awarded to any American citizen, by one of the most eminent learned Societies; for a labor at least of erudition in the highest branches of historical knowledge, philology and ethnography.

But this kind of merit and lofty knowledge is so little understood and valued here, that

some periodicals have refused even to notice this literary fact!

#### 121. ALLEGHANIES MOUNTAINS.

Physical geography is much neglected in the U. States; lakes and streams must be surveyed and laid out in maps, but table lands mountains and hills are often altogether omitted or incorrectly delineated. Our first Surveyors began their surveys in the level atlantic region, when they came to the hills and mountains they commonly scurveyed them by running lines near them, reducing all elevations to flat acres of aerial surface instead of terrestrial surface, thus three acres in mountains are often 4 or 5 in reality. From these erroneous surveys our maps are made. In some maps lofty mountains are not even laid out; thus the Catskill mountains 4000 feet high, are not found in many maps of N. York. Tablelands and hills were altogether neglected. Thus we had no correct delineation of our soil, slopes and elevations of land.

When mountains were introduced in maps, they were put down at random, at first in heaps, laterly in ridges. Thus was formed the opinion that all our mountains were in parallel ridges. Yet nothing is more erroneous: Since nearly all our mountains are in fact TABLE-LANDS or PLATEAUX, rising by successive steps or in some instances abruptly, with some ridges and

peaks in various places, or in chains or groups.

Valleys are also neglected, and it is not shewn whether streams run in plains, basins, ancient lakes, narrow valleys or gullies. As early as 70 years ago, Hutchins surveyed the river Ohio and noticed some features of the valley where it flows; but later geographers have not even attended to his map, trusting to new *flat surveys*. In 1818 I surveyed again topographically that valley with all its hills, gaps, bluffs, lakes, &c. for Cramer and Spear of Pittsburgh, who paid me \$100 for this labor; but have since resold it to somebody else, and it has not yet appeared in our general maps.

Mr. Tanner, desirous to improve his great map of the U. States, purchased from me last year, my surveys of mountains, spurs, hills, knobs and tablelands, chiefly in the States of Kentucky, Indiana, Ohio, N. York and Pennsylvania. He has inserted them in his map of 1832, which if compared with the former map of 1830, will evince a vast difference in physical geography. He has also inserted the tablelands and mountains of Tennessee, from the late map of Rhea. And quite lately the Gold Mines Region has called forth a new map of Peck, (in Silliman's Journal) which delineates the South East slopes of our mts.

We have then now something like a correct outline of the contour of our Alleghany moun-

tains, formerly called Talegaw, except in the S. & S. W. I was the first to trace their contour or limits to the North, N. W. and West. Darby and Thomas had long ago spoken of the N. W. end of the Alleghanies near lake Erie, 2000 feet high, but as late as 1832 they were not in our maps! yet they are there as in N. E. an abrupt rise of the Alleghany tableland, 360 miles wide from lake Erie to the Catskill, and quite connected in the North; as the rise of the Delaware, Susquehannah, Ohio and Genessee streams ought to have indicated. Through N. York this tableland sends many hilly spurs between the minor lakes, and has a broad apron or tableland step forming the falls of Niagara and Genessee; while at the falls of the Mohawk a spur runs out to join the Canadian and Primitive mts of the North. At the N. E. end they are called Kiskanon or Catskill mountains, and rise abruptly 4000 feet.

The Mattawan mountains vulgarly called Highlands are primitive, and form a narrow broken tableland, cut up by the Hudson river, and tide-water, with peaks of 1500 feet; they run W. and E. and soon after become the Taconic mts. running from S. to N. between the Hudson and Connecticut basins, to become further off the Green mts of Vermont and the White mts of New Hampshire and Maine, 7000 feet high, the highest of our mountains, and the primitive

nucleus of all the New England mountains and hills.

But leaving these Northern mountains to return to the Alleghanies proper, we find them forming a broad tableland in North Pennsylvania, which gradually becomes broken into ridges by the valleys and streams. But the main or middle branch dividing the Eastern and Western Waters, called the Backbone mountain is yet a broad tableland in center county, and gradually tapers to 20 and 10 miles breadth at the Pittsburg and Cumberland roads; although our maps represent it as a mere ridge, I pointed out this error to Mr. Tanner, but it could not be conveniently corrected in his map, and thus is there yet!

The Delaware, Susquehanna, Juniata, and Potomac rivers rise in this tableland and break through these ridges in many places, forming many successive watergaps, which were ancient outlets of mountain lakes according to Volney's theory; but as no fossil remains of fresh water animals are found therein, it is very probable that they were inland seas and gulfs of salt water when the Atlantic States were under water. The hudson basin above Newburg was also such an inland sea. All the fossils of these inland seas are marine exuvia of very ancient date with a few diluvial remains.

The principal ridges skirting this Alleghany tableland are to the east, 1 Turtle mt, 2 Siding mt, 3 Tuscarora mt, 4

Kitaniny mountain, which are from 5 to 10 miles broad and properly parallel spurs of the Alleghany separated by narrow valleys while the 5th or most easterly is separated by a broad valley, is of a different and more primitive formation, forming a tableland from ten to twenty miles wide; it is a long spur of the primitive Mattawan mountains, called Schooley mountains, in New-Jersey, South mountains in Pennsylvania, Blue ridge in Maryland and Virginia; but it is continuous only broken through by 5 River gaps, although primitive it is much lower than the second Alleghany, averaging only 1000 feet or one half of the average of the Alleghanies, yet it must be recollected that at the N. E. it rises to 7000 feet in the White mountains, and at the S. E. to 4500 feet in the Apalachian mountains, uniting these two distant groups by a long narrow band or chain.

Beyond it easterly are two or three smaller ranges of hills forming as many steps and chiefly primitive; they bear many different names from New Jersey to Georgia, Pigeon hills West of Susquehannah, Monocacy in Maryland, Bull hills in Virginia, Yeona and Hope hills in Carolina and Georgia, yet they are consimilar forming chains broken by the streams, and average 500 feet in height, but more to the N. and S. at the ends.

In a N. W. direction from Philadelphia to Lake Erie,

many more mountains, ridges and table lands are found with peculiar names, being formed by the valleys breakings.

Westerly of the Backbone mountain is the Laurel mountain or ridge 7 to 15 miles broad, next the Chesnut hills, or ridge, after which comes a hilly broken region 200 or 300 miles broad North of the Ohio river extending spurs through Ohio called Scioto hills forming the Silver hills of Indiana, the Wabash hills of Illinois, and separated from the the Ozark mountains by the Mississippi valley and gap of Girardeau.

South of the Ohio river in Kentucky is a large hilly table land, called Knob hills or Wasioto of the Indians, uniting with the Scioto hills at the Scioto river, with the Silver hills at Salt river, and with the Wabash hills below the Wabash river. This range or tableland is very irregular and I have traced it throughout in Tanner's map, the height over the low lands or limestone plains, varies from 200 to 500 feet, or higher still East when called Pine mountains. It is properly a spur 400 miles long of the Cumberland mountains, and of the same geological structure slaty and gritty.

The Cumberland or Wasioto mountains fill the whole of West Virginia, giving rise to many rivers. It is properly a Plateau or the Western step of the Alleghany, forming North a broken ridge ending at the Ohio, and South a broad tableland in Tennessee, sending

West a spur called the Buffalo hills, dividing the waters of the Cumberland and Tennessee rivers. South of the Tennessee river are the Apalachian mountains, the least known of all our mountains, and which I pant to explore; they are represented as a winding ridge running East to West, but are probably also a tableland with aprons and spurs, giving rise to the rivers falling in the gulf of Mexico. Their structure and geology is hardly known; but they are deemed secondary and filled with fossil remains to the West in Alabama and Mississippi, while they meet in Georgia, by the Lookout mountains with the primitive Cherokee mountains at the head of Cuza or Coosa river, these last are here very lofty 4500 feet high, yet called the Blue ridge on its South West end, but are the end South East of the Alleghanies collectively. This long East ridge is very winding through the Carolinas and Virginia, unbroken by rivers, except by James' river near the Otter Peaks, the Central knot of this primitive chain. It has many other chains and groups of peaks.

It is very remarkable that S. of James' River, this chain becomes the loftiest, and divides the Waters of the Atlantic and Ohio basin: while the secondary Alleghany ranges westerly becomes lower and broken by the water gaps of the many rivers forming the Kenhaway and Tennessee.

This is a peculiar feature of

these mts in direct contradiction with the northern features. Another is found in the Unaka mts. (dividing N. Carolina from Tennessee) forming a narrow winding ridge 4000 feet high, primitive on the eastern slope and secondary on the western slope. The Cowita mts also primitive are E. of it and W. of the Blue Ridge, 3000 feet high.

In east Tennessee or west of Unaka mts are 3 ranges of mts between the branches of the Tennessee river. 1. Chilhowi 2500 feet. 2. Bay 2100 feet. 3. Clinch 2200 feet. and lastly comes the Cumberland mts 1800 feet, which by Walden mt to the N. and Lookout mt S. form the great Tennessee water gap.

Many names are given to these ranges in Virginia, between the stream of the Potomac and Kenhaway branches; but they are mere continuations. The Unaka mts become the Iron mts, and S. of James' river head, connecting transverse chains, bind and blend together the primitive and secondary ranges in a very curious way not yet geologically explained.

Thus far from the Alleghenies being a mere bundle of parallel ridges as geographers and geologists have supposed through false surveys, we find them a vast and lofty mass of mingled mountains, tablelands, peaks, hills, groups, knobs, spurs, steps, aprons, slopes, winding chains and some parallel ridges: nearly

1500 miles long from N. E. to S. W. and very unequally wide, with all the geological formations among them.

There is nothing exactly like elsewhere in the world: the Pyrenees, Apennines, Carpathian, usually compared are totally different in structure and configuration. Therefore these interesting mts demand the utmost attention from the geographer, geologist, mineralogist, botanist, and philosopher. I mean to explore them every year over again. Their valuable mines of coal, iron, gold, &c. begins to draw the attention of many; but I will seek there the unexplored fossils, flowers, animals and precious stones which I know they contain: taking maps and surveys of remote valleys and ranges to add to general knowledge.

Is it not strange that while our political geography (which is fluctuating every year) is so much attended to, altho' new maps are needed every year to show new counties and towns: physical geography, which if once well drawn, would be forever permanent, has been so utterly neglected, or so long improperly understood?

C. S. RAFINESQUE.

## 122. THE PATAGONS.

The nations dwelling in Austral America were thus nicknamed by Magellan, in 1520, from two Catalan words meaning *hoof paw*. For 312 years past, they have been the subject of romances, fables and systems. All the nations S. of



Buenos Ayres have been deemed Patagons, altho' stated by others to consist of several nations and tribes, different in size, complexion and language.

Many writers call them a race of giants and lately even a peculiar species of man! while others deny their great size and even their existence! It would be tedious to enumerate all the various false opinions to which they have given rise.

Molina and Falkner's more rational belief deserve alone attention; they deemed these Patagons only a branch of the Aucas or eastern Chilians, who are known to be often of a very tall size.

But even this system is erroneous, because the languages and complexions of the various Austral tribes, were not well attended to. Yet Pigafetta the historian of Magellan voyager gave a vocabulary of the true gigantic Patagons, and described them as tall men 7 feet high of a yellowish complexion, painting their bodies and wearing skin mantles. While the Aucas or eastern Chilians of the Andes altho' often nearly as tall are of a different complexion and language, do not paint and wear woollen ponchos.

By comparing carefully and critically the accounts of fifty travellers and historians, I have ascertained many tribes in Austral America, which shall be distinguished and described in the first vol. of my history of America (upon Austral America.) They may be

reduced to 3 real nations; 1. The Aucas or Chilians, 2. the Puelches or Talabets, 3. Cunis or Poyas, which are all intimately connected altho' divided into 30 or 40 tribes.

All have been called Patagons by some travellers, but the original Patagons of Magellan are only one of these tribes, called *Tinguis*, *Tiniguis*, *Tinguiches*, *Guidiches*, *Keyus*, *Tiramenets*, *Capacs*, &c. by various authors, and dwelling near the strait of Magellan to the Western side, from whence they ramble in summer to the Eastern shore. They belong to the Poyas nation extending from South Chili to Statenland, which do not speak Chilian.

Capt. Morrell appears to be the last traveller who has seen these true Patagons in 1823 and 1826; but without knowing them as really such. By 5 words of their language mentioned at random they are the same as those of Pigafetta. Such as God *Setedos M. Setebos* of P. &c. He visited two of their villages on the R. Capac, lat. 52 and 53, of 4000 and 2000 population. Their complexion is pale yellow, they paint, wear skin mantles, and thus are like those of Pigafetta. The tallest was 6 feet 4, but he saw in tombs, skeletons of 7 to 8 feet.

The vocabulary of Pigafetta is of the utmost historical importance. It has enabled me to trace the origine of these Patagons, since I have detected in it 81 per cent of analogy with the *Cairi* of Trinidad Id.



and 77 per cent with the *Taino* of Hayti in the 16th century, both spoken by Aruac nations.

This fine nation seems to have overspread South America to the very end, altho' it may be one of the last come from the East, since nearest to the Atlantic shores, and with striking philological analogies with the ancient nations of Europe and North Africa.

The Aruacs were spread over all the West Indies, except where driven off by their foes the Caribs, they were mingled with them in Guyana, Columbia and Brazil, under many names; even the Taos or Chiquitos of Chaco appears to have been a branch, since they have 80 per cent analogy in languages with the *Taino*.

The famous Muhizcas so early civilized were also a kin to them, since they have 62 per cent analogy with the Tao, 67 per cent with the Patagon.

The other nations of South America with 50 per cent and upwards analogy with the Patagons are,

Darien 68 per cent.

Mbaya 64 per cent.

Lule and Vilela 50.

While in North America we find the Mayan, Chontal and Poyais each 60 per cent. Tarasca 50 &c.

Thus becomes evident how absurd and erroneous is the opinion that American languages have no mutual affinities, and that the Patagons are a peculiar species of gigantic men.

C. S. R.

123. N. G. CAULOMA. Raf.

This is a fine N. G. of radiate plants, discovered in 1818 in the barrens of West Kentucky, deemed then doubtful, seen again in 1823 and ascertained to be a peculiar G. near to *Rudbeckia* and *Sarcheta*: the name means edged stem.

CAULOMA. Perianthe in double series 12 parted, Phoranth the convex, with biform chaffs, external flat membranaceous, internal linear carinate, amplexens, thick above. Rays 12 bidentate. Seeds oblong compressed naked, no teeth.

*C. tomentosa* Raf. Stem virgate simple, angular winged, wings tomentose; leaves sessile remote decurrent, lanceolate rhomboidal, tomentose, end serrate acuminate: flowers terminal glomerate subsessile tomentoes, perianthe lanceolate acute, rays yellow lanceolate.

A singular plant 1 or 2 feet high, entirely wooly, blossoming in June and July.

124. Principles of the Philosophy of new Genera and new species of Plants and Animals.

*Extract of a letter to Dr. J. Torrey of New York dated 1st Dec. 1832....* I shall soon come out with my avowed principles about G. and Sp. partly announced 1814 in my principles of Somiology, and which my experience and researches ever since have confirmed. The truth is that *Species and perhaps Genera also, are forming in organized beings by gradual deviations of shapes, forms and*

organs, taking place in the lapse of time. There is a tendency to deviations and mutations through plants and animals by gradual steps at remote irregular periods. This is a part of the great universal law of PERPETUAL MUTABILITY in every thing.

Thus it is needless to dispute and differ about new G. Sp. and varieties. Every variety is a deviation which becomes a Sp. as soon as it is permanent by reproduction. Deviations in essential organs may thus gradually become N. G. Yet every deviation in form ought to have a peculiar name, it is better to have only a generic and specific name for it than 4 when deemed a variety. It is not impossible to ascertain the primitive Sp. that have produced all the actual; many means exist to ascertain it: history, locality, abundance, &c. This view of the subject will settle botany and zoology in a new way and greatly simplify those sciences. The races, breeds or varieties of men, monkeys, dogs, roses, apples, wheat... and almost every other genus, may be reduced to one or a few primitive Sp. yet admit of several actual Sp. names may and will multiply as they do in geography and history by time and changes, but they will be reducible to a better classification by a kind of genealogical order or tables.

My last work on Botany if I live and after publishing all my N. Sp. will be on this, and the reduction of our Flora from

8000 to 1200 or 1500 primitive Sp. with genealogical tables of the gradual deviations having formed our actual Sp. If I cannot perform this, give me credit for it, and do it yourself upon the plan that I trace.

C. S. R.

#### 125. N. G. SCADIANUS. Raf.

A beautiful liliaceous plant of Louisiana, with splendid umbella of azure flowers, has long been known in our gardens near Philadelphia and our books of botany as the *Crinum Americanum*; which I have lately ascertained to be very different from that South American plant, and it is now astonishing to me how it could have been thus misnamed, since it is not even a *Crinum*; but a N. G. and totally distinct from the plant of Linneus, as the following comparison will shew.

*Crinum Americanum*. Descr. of L. leaves oblong carinate undulate, bipedal, very broad. Scape compressed, flowers yellowish white, fragrant, segments uncinat reflexed.

Our plant, thus wrongly called by Pursh, Nuttall &c, has leaves ligulate flat, acuminate, pedal, breadth uncial. Scape round, flowers blue, inodorous segments erect not uncinat!!!—Thus not a single character is alike. What they have in common is merely a large bulb, thick leaves, a scape, a multiflore umbel, &c. If it is to be a *Crinum* it must be called *Cr. ceruleum* Raf; but it is not, having unequal stamina, &c.

Linneus was apt to form his

genera on a single Sp. and refer others by mere habit. He has done so here. His *G. Crinum* contains 3 or 4 separate *G.* The *G. nervosum* must form the *G. Stemonix* by unguiculate filaments and polyphyllous umbel. L'Heritier has made the *G. Agapanthus* with *Cr. africanum*. Others are referred to *Amaryllis* and *Hemantus*. I propose to call this *Scadianus* meaning blue umbel, and thus define it.

Corolla with tube oblong, limbus equal campanulate, six fid. segments canaliculate, 3 broader obtuse, 3 narrower acute. Stamens, 6 unequal curved filiform. Pistil oblong, free. Style filiform straight, stigma simple.

Compare this with *Crinum* & *Agapanthus*.

This plant gave rise to another singular blunder. It grows in the marshes of New Orleans, and is called Blue Squill, whence it was mistaken for the true Squill or *Scilla maritima* and collected as such! but was found more suitable to adorn gardens than pharmacies.

126. On 3 N. G. of Land Shells from Buenos Ayres in South America. By C. S. Rafinesque.

They are from the cabinet of Prof. Green, where they are not labelled, and who permitted me to describe them.

1. *Siphalomphix*, Raf. N. G. shell conical, opening oval acute, end rounded, columella twisted with a tubular umbilic. It differs from *Agathina* by the columella and umbilic.

*S. bonariensis*, Raf. or *Ag. bonariensis*, Raf. Six spires tip nearly obtuse, first spire with a transversal angle—shell about one inch long, whitish semi-transparent, brittle.

2. *Stegomphix*, Raf. N. G. shell oval opening nearly round lips not quite joined, the internal covering a small spiral umbilic.—Therefore different from *Cyclostoma* and *Paludina*.

*St. elegans*, Raf. (or *Cyclostoma*) oval with 5 spires, white, end nearly obtuse yellow, spires with many small prominent transversal strias.—One inch long or less very pretty.

3. *Diplicaria*. Shell oval, opening oval, columella broadly plaited with 2 folds or thick oblique ribs.—Near *Voluta* and *Torticella*, but not marine.

*D. bonariensis*, Raf. Oval obtuse smooth olive color with 2 spires only—small shell of half inch.

127. On 5 New Fresh Water Shells, of Bengal and Assam in Asia.

They have been collected by Dr. Burroughs and are in my cabinet.

1. *Planorbis albenscens*, Raf. nearly smooth whitish flattened on the right side with 3 raised spires, only 2 on the left in a hollow, opening hardly oblique. Size above half inch.

2. *Paludina vitula*, Raf. oval conical acute, 5 spires, swelled before, olivaceous with narrow spiral brown bands.—Size about one inch long.

3. *Paludina fragilis*, Raf.

oval swelled acute, 5 spires, smooth brittle, of a uniform dark or pale horny color.—Smaller than the last.

4. *Melania tessula*, Raf. oblong, brown, seven spires, somewhat tessellated by prominent ribs and small spiral strias, about one inch long, I have 3 varieties. 1. first spire with duplicate strias—2. do. single strias, knobby tessellate shorter. 3. do. strias nearly obliterated. Are they different Sp?

5. *Melania costula*, Raf. elongate, olivaceous brown, 7 or 8 spires, all with regular angular ribs lengthway, the first spire with a spiral angle ending at end of opening. Over 1 inch, from the river Ganges.

#### COMMERCIAL ENTERPRISE.

The hints in No. 1, of this Journal on Scientific Voyages have not been thrown in vain. Dr. Burroughs is gone on another voyage of trading and collecting Natural objects in South America and China—Other similar voyages as connected with Sealing are preparing in Baltimore Albany and elsewhere. I was applied to from Albany, to go and direct such a voyage of Natural Sciences, which I have been compelled to decline, as I had stated I only claimed the merit of drawing the attention on the subject, and would confine my future travels and discoveries on dry land; but have recommended to employ young naturalists or Students, some of whom have applied to me to go on such an honourable enterprise. Captain Morrell's voy-

ages lately published have evinced how much may be achieved in various Countries with little means.

It would even be worthwhile to set on foot exploring Journeys in our own country: these I might perhaps join. We have many private Explorers now, Audubon, Leitner, Conrad, &c. beside myself, who collect for sale or museums. Florida, Alabama, Texas, New Mexico, the Apalachin, Ozark, and Oregon mts would above all reward well future labors of this kind.

#### NOTICE.

The second year of this Journal is begun rather under discouraging difficulties, which might warrant its suspension; but the editor is determined to overcome them if he can. Instead of enlarging the size he is compelled to reduce it, although the price must still be *One Dollar* per annum; but half of this has been found to go towards the postage—taxes of Editors, the same on Journals of \$1 as on those of \$10. The supporters of this Periodical having chiefly been Scientific men, it shall be made still more scientific if possible.

Those who paid \$2 in advance in the expectation of an enlarged Journal, will be satisfied by the additional present of a Work of the Editor's, who offers them his thanks for their support: his other friends he hopes will enable him to complete a volume at least of this repository of Science and facts, by sending him the rate of this year.

*Account of the Botanical Collections of Professor C. S. Rafinesque.*

I began to herborize and collect plants in 1795, when a child. In 1815, I lost by my shipwreck all my early herbals of Europe and America, made during 20 years, among which a superb herbal of Sicily of 2000 species and 20,000 specimens. In 1816 I began over again in N. America, and have collected in 18 States and Canada during 16 years, have received besides, plants from all the States and Territories, from Missouri, Oregon and Texas, to Florida, explored our botanical gardens and public herbals, and exchanged with European botanists.

My own herbals contain now about 4200 N. American species, 5000 varieties, and 25,000 specimens, nine tenths of which have been collected by myself, and after exchanging or selling already 10,000 specimens. My foreign herbals contain about 3,000 species and 8000 specimens from Europe, Asia, Africa, Polynesia, South America and Mexico. I have travelled for this nearly 15,000 miles, of which 5000 as a pedestrian botanist over N. America. My plants are chiefly phenogamous.

Those who have added to my N. Amer. herbals, are

1. *Ladies:* Miss Jane Short, Mrs. Mary Holley born Austin, Mrs. Wallace, Martin, Betton, &c.

2. *Professors and Doctors.* Drs. Torrey, Short, Miller, Ward, Crockatt, Hart, Macwilliams, Brereton, Mease, Brickell, Mitchell, Eddy, Crawford, Locke, &c.

3. *Botanical Authors.* Bradbury; Lewis, Beck, Elliot, Conrad, Halsey, Eaton, Muhlenberg, &c.

4. *Gentlemen or Gardeners,* &c. Gaissen, John C. Short, Ridgely, Hingston, Robert and John Carr, Steinhauer, Booth, Macarran, Knevels, Shultz, Waterhouse, Adlum, Forrest, Durand, Walton, Limner, &c.

Those who have added to my exotic herbals, are

Decandolle, Moricand, Trattenick, Sieber, Bory, Hooker, Swainson, Sheperd, Romer, Shultze, Carr, Lesueur, Bivona, &c.

Those who have bought or received some of my plants are, Decandolle, Moricand, Torrey, Collins, Elliott, Maclure, Radi, Savi, Swainson, Bory, Vandermalen, Agardh, Schreber, Arnott, Hooker, Bastard, Lanthois,

Muhlenberg, Schweinitz, Conrad, Carr, &c. Many of my new plants are to be seen in their herbals.

After this statement it will be idle to say that my new plants are not well known. Any one can see them or possess them by paying for them. I have in my herbals 1000 N. G. or N. Sp. or very rare plants, to show or sell, already published or to appear in my supplemental Flora.

I have divided my American herbals for my convenience and illustration of botanical Geography, into 5 separate herbals of as many regions, in pink paper 14 inches by 8, according to the natural orders and genera.

1. *Alleghany or Atlantic Herbal* of plants of the Atlantic states, and mountains from New England to Virginia, about 2000 species.

2. *Florida Herbal* of plants of the southern region, extending from Florida to Carolina and Pinebarrens of New Jersey, about 1500 species.

3. *Louisiana Herbal* of plants of the Western regions, or the Mississippi and Missouri valleys, from Louisiana and Texas to Illinois and Missouri, about 2000 species.

4. *Oregon Herbal* of plants of the Oregon mts. from Upper Missouri to the N. W. coast, only 700 sp. with me as yet.

5. *Canada or Boreal Herbal* of plants from the Arctic regions, Canada, Labrador. Groenland, and extending south to the great lakes, white mts, and Siberia, about 1200 species with me.

Many plants are of course common to several of those 5 regions, but each are distinguished by a peculiar vegetation and some botanical features: as Pickering has partly unfolded in his Botanical Geography of North America for 3 at least. Decandolle has also stated that we have 3 botanical regions, the Arctic, U. States and Oregon; out of the 20 of the whole world! Eaton has made only 2, Northern and Southern, but we have 5.

Besides these 5 regular Herbals, I have 12 other Extra Herbals: 1 and 2, N. G. and Sp. of Dicotyle and Monocotyle plants. 3, Grapes of N. America. 4, Trees and Shrubs, Do. 5, A medical Herbal of all our medicinal plants, with the officinal plants of Europe, Africa,

Asia, &c. 1000 sp. 6, Extra herbals for sale, gigantic size to please those who like those. 7, ditto, good size. 8, ditto, Portable herbal of small plants. 9, ditto, Superb Herbal of beautiful showy flowers and plants, of all parts of the world, 800 sp. 10, Marine Herbal. 11, Diseased plants and monsters. 12, Agricultural herbal.

To show the rich contents of these herbals, it will be sufficient to state that of some genera which I keep together for monographs and peculiar study, I possess N. American species of

Pyrola, 15 species.	Vitis, 36.	Gentiana, 20.
Prunus, 32.	Rosa, 24.	Clintonia, 7.
Tradescantia, 15.	Viburnum, 22.	Pavia, 7.
Commelina, 10.	Lobelia, 18.	Anychia, 10.
Unisema, 9.	Heuchera, 9.	Onoclea, 5.
Dodecatheon, 8.	Trillium, 25.	Iris, 12.
Viola, 40, &c.	Mesadenia, 10,	Samolus, 5. &c.

And in the same proportion with many other genera: thus have I increased 50 genera of our Flora, like *Fraxinus*, *Carex*, *Quercus*, *Salix*, *Aster*, *Ramunculus*, &c. have been by others. Whenever one of our plants has been deemed by any botanist similar to a European one, I have tried to put alongside the European plant, to show the difference or similitude.

Besides these 27 N. American herbals I have 15 foreign or Exotic herbals. 1, Of England and France. 2, Alps. 3, Germany, Hungary, and Russia. 4, Italy and Sicily. 5, Greece and Candia. 6, Asiatic herbal of Palestine, Syria, Persia, and Caucasus. 7, Plants of India and China. 8, Polynesian herbal. 9, Herbal of Egypt. 10, Cape of Good Hope. 11, Africa. 12, South America. 13, West Indies. 14, Mexican States. 15, Mosses and confervas of all parts.—Of many of these I have but few species, altogether about 3000.

As I travel every year I hope to add yet many sp. chiefly of the Southern States. I shall perhaps visit Tennessee, Carolina and Alabama this year.

I offer to sell, buy or exchange such plants or any other. My price for my N. G. and N. Sp. is \$ 10. per hundred, the same for gigantic plants. Other American



plants at \$ 5. labelled, or \$ 4. unlabelled, per 100. Rare plants, at \$ 6. to 7. Small plants in portable herbals at \$ 3. to 4. per 100. These prices must be paid here on delivery. If sent abroad or far off 20 per cent. must be added for insurance, packing, trouble and delay.

Of about 225 N. Sp. of exceedingly rare plants, of which I shall publish a list; I have only one specimen left, which I hold at 20 cents each, and even some at 25 cents, and will not even sell unless I know that they shall be deposited in a public or well known herbal, where they may be seen.

N. American and Mexican plants which I have not, I am willing to buy at the same rate, deducting 20 per cent. for my commission, or more, if unlabelled; I take them in payment of my Atlantic Journal and works, where my N. G. and Sp. are described.

Exchanges will now be seldom made, unless for plants of new localities or that I have not, which it is impossible to ascertain unless I see them. Whatever will be sent me, will be duly valued, and the equivalent paid in plants asked, or books, or money.

C. S. RAFINESQUE, *Prof.*

No. 59, North Eighth-St.

*Philadelphia, April, 1833.*

#### PROFESSOR RAFINESQUE'S

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